

RoHS Compliant Product  
A suffix of "-C" specifies halogen & lead-free

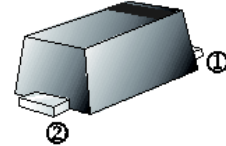
### FEATURES

- Low forward surge current
- Ideal for surface mounted applications
- Low leakage current

**SOD-123JD**

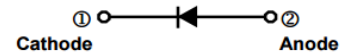
### MECHANICAL DATA

- Case: JEDEC SOD-123JD, molded plastic over passivated chip
- Terminals: Solder Plated, solderable per MIL-STD-750, Method 2026
- Polarity: Color band denotes cathode end



### MARKING

Part Number	Marking Code	Part Number	Marking Code
SM4001JD-C	A1	SM4005JD-C	A5
SM4002JD-C	A2	SM4006JD-C	A6
SM4003JD-C	A3	SM4007JD-C	A7
SM4004JD-C	A4		



### PACKAGE INFORMATION

Package	MPQ	Leader Size
SOD-123JD	3K	7 inch

### ORDER INFORMATION

Part Number	Type
SM4001JD-C~SM4007JD-C	Lead (Pb)-free and Halogen-free

### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

(Rating 25°C ambient temperature unless otherwise specified. Single phase, half wave, 60Hz, resistive or inductive load.  
For capacitive load, de-rate current by 20%.)

Parameter	Symbol	Part Number							Unit
		SM4001 JD-C	SM4002 JD-C	SM4003 JD-C	SM4004 JD-C	SM4005 JD-C	SM4006 JD-C	SM4007 JD-C	
Maximum Repetitive Peak Reverse Voltage	$V_{RRM}$	50	100	200	400	600	800	1000	V
Maximum RMS Voltage	$V_{RMS}$	35	70	140	280	420	560	700	V
Maximum DC Blocking Voltage	$V_{DC}$	50	100	200	400	600	800	1000	V
Maximum Average Forward Rectified Current	$I_F$	1							A
Peak Forward Surge Current, 8.3ms single half sine-wave superimposed on rated load	$I_{FSM}$	30							A
Maximum Instantaneous Forward Voltage $I_F=1A @25^{\circ}C$	$V_F$	1.1							V
Maximum DC Reverse Current at Rated DC Blocking Voltage	$T_A=25^{\circ}C$	5							$\mu A$
	$T_A=125^{\circ}C$	50							
Typical Junction Capacitance <sup>1</sup>	$C_J$	9							pF
Typical Thermal Resistance <sup>2</sup>	$R_{\theta JL}$	20							$^{\circ}C/W$
	$R_{\theta JC}$	40							
Operating & Storage Temperature	$T_J, T_{STG}$	-55~150							$^{\circ}C$

Notes:

1. Measured at  $f=1MHz, V_R=4V$ .
2. FR-4 Board Heat sink size:  $10*10*0.2mm$ .

**CHARACTERISTIC CURVES**

Fig.1 Forward Current Derating Curve

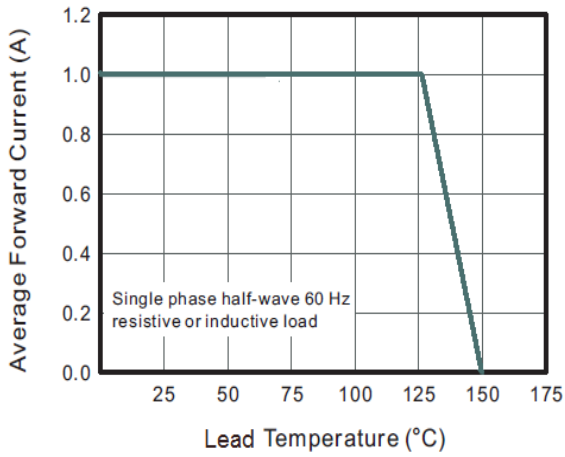


Fig.2 Typical Instantaneous Reverse Characteristics

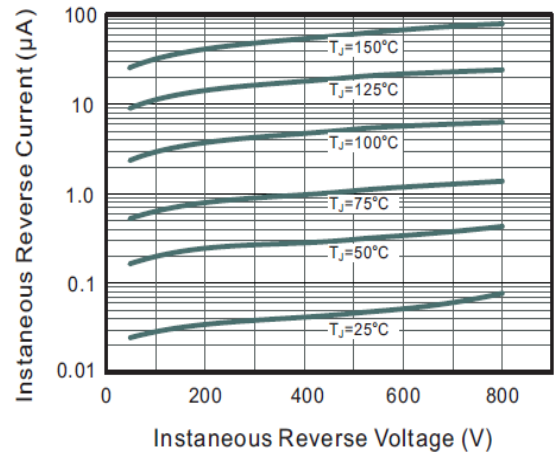


Fig.3 Typical Forward Characteristic

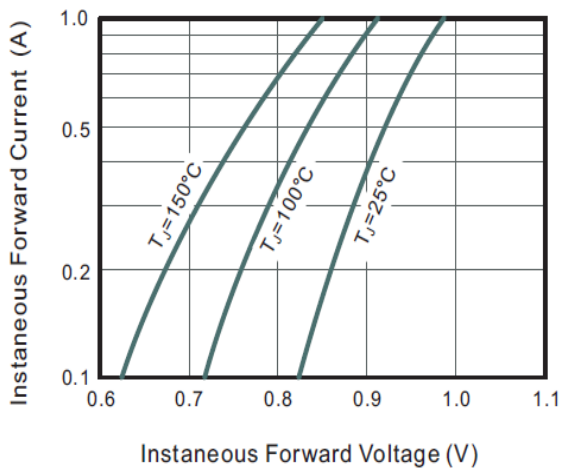
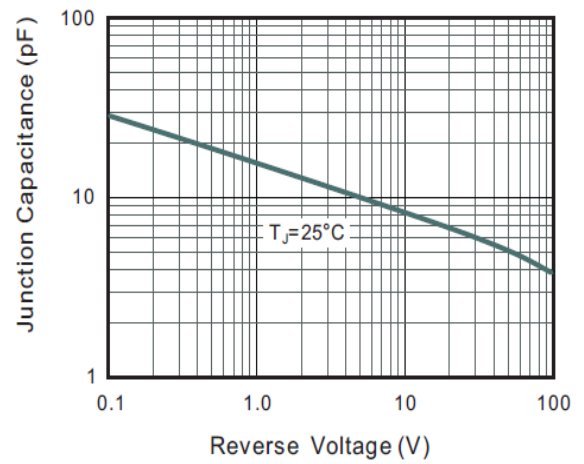
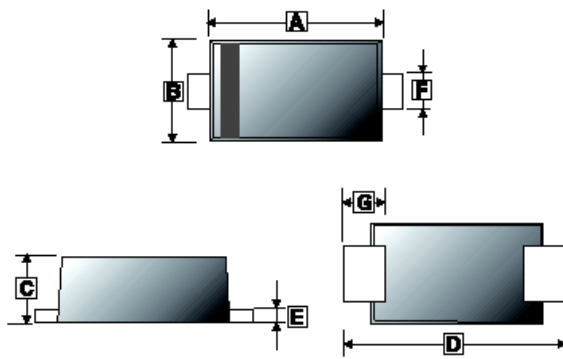


Fig.4 Typical Junction Capacitance



**PACKAGE OUTLINE DIMENSIONS**

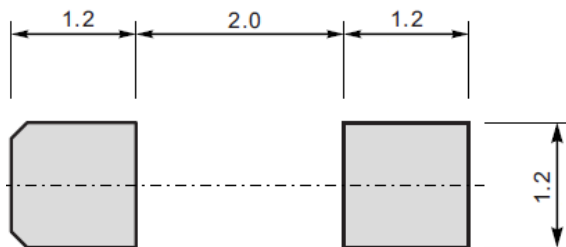
**SOD-123JD**



REF.	Millimeter	
	Min.	Max.
A	2.60	2.90
B	1.70	1.90
C	0.90	1.10
D	3.50	3.80
E	0.10	0.20
F	0.80	1.10
G	0.70	0.90

**MOUNTING PAD LAYOUT**

**SOD-123JD**



\*Dimensions in millimeters